Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Smithville Lake

Waterbody Segment at a Glance:


State map showing location of watershed

Counties: Clinton and Clay
Nearby Cities: Kansas City, Smithville, Plattsburg, Kearney

Area of Impairment:
Pollutant: Atrazine
Source:

Note: The long term average atrazine level in the lake now meets state standards for a drinking water supply source water. As a result, atrazine was removed as a pollutant from the 2002 303(d) list. The lake remains on the 2002 303(d) list due to mercury levels in large-mouth bass. A separate Information Sheet discusses mercury contamination of Missouri waters.

TMDL Priority Ranking: N/A

Beneficial uses of Smithville Lake

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Human Health associated with Fish Consumption
- Boating and Canoeing
- Whole Body Contact
- Drinking Water Supply

Use that is impaired

- Drinking Water Supply

Standards that apply

The impairment of this lake is based on exceedence of the specific criterion of three micrograms per liter (µg/L or parts per billion) atrazine, as an average of the period of record, contained in Missouri's Water Quality Standards. 10 CSR 20-7.031 Table A.

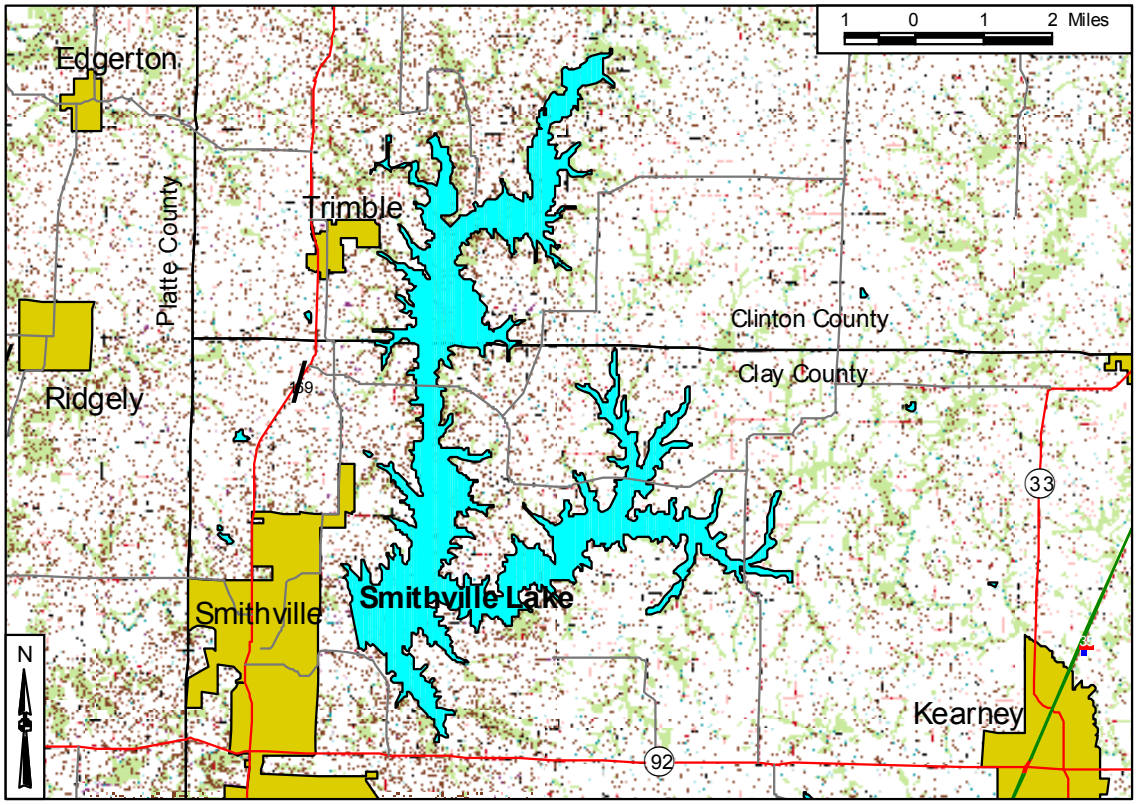
Background Information and Water Quality Data

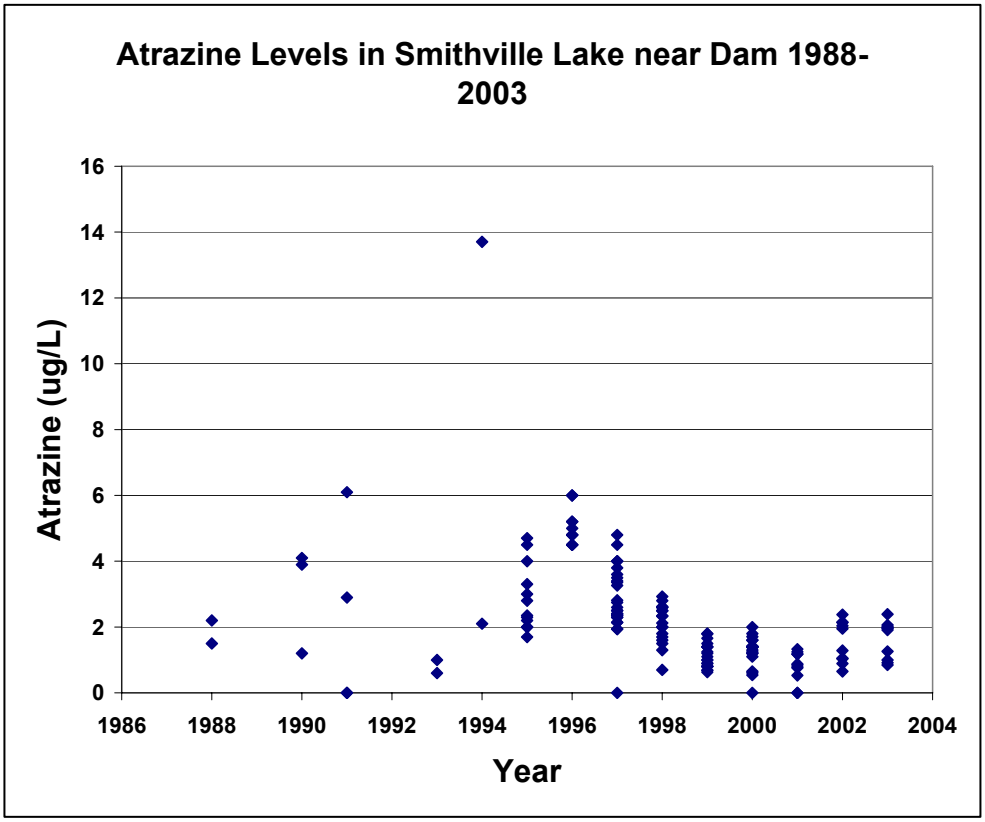
In 1965, the Little Platte River flooded and covered the town of Smithville to a depth of 12 feet, and caused $30 million in damages. As a result, the United States Army Corps of Engineers constructed Smithville Lake to control further flooding. The dam was completed in 1977 at a cost of $68 million.

The lake has a drainage area of 213 square miles and covers 18 miles of the Little Platte valley. Smithville Lake is a drinking water source for the towns of Plattsburg and Smithville. Monitoring over the last decade has found that concentrations of atrazine sometimes exceed state drinking water standards. Atrazine is considered a possible human carcinogen, so the state standard is set at three micrograms per liter (µg/L) or parts per billion for waters used for drinking water supply.

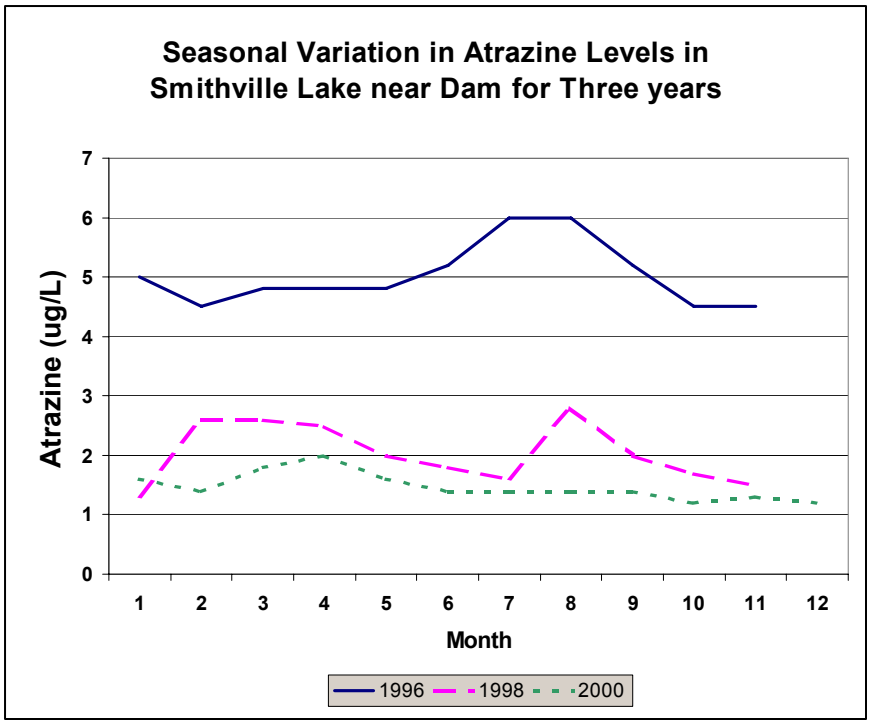
Atrazine is a widely used herbicide for control of broadleaf weeds. It is the most heavily used herbicide used on corn and grain sorghum in Missouri. Since 1993, its uses have been greatly restricted. Runoff from corn and sorghum production areas in the watershed has resulted in measurable amounts of atrazine being detected within the lake. In the last few years, atrazine levels in Smithville Lake have been lower and the long-term average now meets state water quality standards. Therefore, the lake was deleted from the 2002 303(d) list for atrazine.

Smithville Lake near Smithville in Clinton and Clay Counties, Missouri





Source: Missouri Department of Natural Resources



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